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The Six Dimensions of Personality (HEXACO) and their Association with Network  
Layer Size and Emotional Closeness to Network Members

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## 26 Abstract

27 Previous work has examined how specific personality dimensions influence social  
28 network characteristics. Yet, it is unclear how the full range of personality relates to  
29 the quantity and quality of relationships at different network layers. This study ( $N =$   
30 525) investigates how HEXACO personality dimensions relate to size and emotional  
31 closeness of support and sympathy groups. Extraversion positively related to support  
32 group size, but did not significantly relate to sympathy group size or emotional  
33 closeness. Openness to Experience positively related to support group, but not  
34 sympathy group, size. Honesty-Humility, but not Agreeableness, positively related to  
35 emotional closeness to sympathy group. Findings suggest that personality effects vary  
36 across network layers and highlight the importance of considering both emotional  
37 closeness and group size.

38

39 Keywords: individual differences, HEXACO, social networks, emotional closeness

## 1. Introduction

Personality is important for our understanding of individual patterns of cognition, motivation, emotion, and behavior—what has been described as “*a kind of thematic recurrence within the events of a life*” (Nettle, 2007, p. 12). Here, we focus on the effects of personality on characteristics of individuals’ innermost network layers, that is, on the number and emotional intimacy of close social relationships.

Social networks are hierarchically structured in successive layers of increasing size and decreasing emotional intimacy (Dunbar, 1998; Hill & Dunbar, 2003; Sutcliffe et al., 2012). Recent work has examined the effects of personality on different network layers’ size and intimacy, but has been limited to specific dimensions, such as Extraversion and Neuroticism (Pollet et al., 2011; Roberts et al., 2008). Other studies, which examined a more exhaustive set of personality dimensions, did not differentiate between network layers, such as support and sympathy groups (Asendorpf & Wilpers, 1998; Selfhout et al., 2010). In this study, we attempt to address these limitations by investigating how the six HEXACO personality dimensions (Ashton & Lee, 2007; Lee & Ashton, 2004) relate to both the size and relationship intensity of individuals’ innermost social network layers.

### 1.1. Social network characteristics

It is widely recognized that not all social relationships are of equal strength or emotional intensity (Bernard et al., 1990; Granovetter, 1973; Milardo, 1992; Wellman & Wortley, 1990). Focusing on emotionally close ties—despite terminology variations—many studies have identified two distinct groupings: a small number of emotionally close ties offering intense emotional support and a larger number of less emotionally close, but still significant, ties that provide more general support (Bernard

64 et al. 1990; Binder et al., 2012; Boase et al., 2006; Milardo, 1992; Wellman &  
65 Wortley, 1990).

66 Research has also shown that social networks are organized in a series of  
67 hierarchically inclusive layers (Hill & Dunbar, 2003; Sutcliffe et al., 2012; Zhou et  
68 al., 2005); the innermost layers, corresponding to the two groupings identified above,  
69 have been termed ‘support groups’ and ‘sympathy groups’. Support groups are  
70 defined as consisting of individuals from whom one would seek support in times of  
71 severe emotional or financial distress; they have an average size of 5 members  
72 (Dunbar & Spoors, 1995). Sympathy groups are defined as consisting of individuals  
73 whose sudden death would be greatly upsetting (Buys & Larson, 1979); they have an  
74 average size of 12-15 members, including support group members (Dunbar & Spoors,  
75 1995; Stiller & Dunbar, 2007).

76 Existing work has noted the importance of examining both the quantity and  
77 quality of relationships within different network layers (Pollet et al., 2011). There is  
78 also evidence of a trade-off between relationship quantity and quality (Roberts et al.,  
79 2009; Binder et al., 2011): as the size of each network layer increases, relationship  
80 intensity seems to decrease (Dunbar, 1998; Hill & Dunbar, 2003). It has been  
81 suggested that this is due to constraints—related to time and cognitive effort—on the  
82 number of relationships one can maintain at a certain emotional intensity level  
83 (Roberts & Dunbar, 2011a; Stiller & Dunbar, 2007; Sutcliffe et al., 2012; Zhou et al.,  
84 2005).

85 While upper bounds seem to exist to different network layers’ size, substantial  
86 inter-individual variation has been documented in both the size and composition of  
87 these layers. Such variation can be partly explained by demographic characteristics  
88 such as sex, socioeconomic status, age, and relationship status (McPherson et al.,

2006; Roberts et al., 2009). Another important factor accounting for network layers' size and composition is personality (Nettle, 2007; Pollet et al., 2011).

### *1.2. Personality and social networks*

Existing research has examined how the Big Five or Five-Factor model personality traits (McCrae & Costa, 1999) relate to social network characteristics. Among adolescents and young adults, Extraversion has been linked to larger social networks and faster network growth, whereas Agreeableness has been associated with higher peer acceptance and less conflict (Asendorpf & Wilpers, 1998; Jensen-Campbell et al., 2002; Selfhout et al., 2010). Conscientiousness appears to positively relate to contact frequency particularly with family members (Asendorpf & Wilpers, 1998).

Findings on the relationships of Neuroticism and Openness to Experience with network characteristics appear less consistent. Whereas some studies have found no direct relationship between Neuroticism and network size (Asendorpf & Wilpers, 1998; Roberts et al., 2008), work in clinical psychology suggests that Neuroticism may relate to smaller social support networks (Furukawa, Sarason, & Sarason, 1998; Henderson, 1977; Russell, Booth, Reed, & Laughlin, 1997; Stokes, 1985). Similarly, the relationship between Openness to Experience and network size remains unclear (Jensen-Campbell et al., 2002; Selfhout et al., 2010), though recent evidence suggests that Openness to Experience is linked to a larger number of new contacts (Zhu et al., 2013).

Research explicitly differentiating the hierarchical structure within social networks has focused on Extraversion; however, existing evidence on its relationship with network characteristics is mixed. Specifically, Roberts and colleagues (2008) showed that Extraversion positively correlates with support group, but not sympathy

group, size. However, this relationship was no longer significant after controlling for participant age. Another study by Pollet and colleagues (2011) examined the relationship of Extraversion with both network quantity and quality; extroverts reported having larger social networks at all layers (support group, sympathy group, outer layer), but did not feel emotionally closer to members of any layer.

### *1.3. HEXACO personality*

Recent theoretical and empirical work in personality psychology has suggested that a six-dimensional framework of personality structure may be a viable alternative to the Big Five and Five-Factor models. Lexical studies of personality structure in diverse languages have consistently demonstrated the emergence of six, rather than five, personality factors (Ashton & Lee, 2007). Based on these findings, Lee and Ashton (2004) have introduced the HEXACO model, consisting of Honesty-Humility (H), Emotionality (E), Extraversion (X), Agreeableness (A), Conscientiousness (C), and Openness to Experience (O).

An important advantage of the HEXACO model, compared to the Big Five and Five-Factor models, is the addition of Honesty-Humility, which is defined by honesty, fairness, sincerity, modesty, and lack of greed. Another difference is that the HEXACO Emotionality and Agreeableness factors result from a re-rotation of the Big Five factors of Emotional Stability and Agreeableness. The HEXACO Openness to Experience is similar to the corresponding Big Five dimension, however, excluding intellect content, in terms of intelligence and mental ability. Finally, the HEXACO Extraversion and Conscientiousness dimensions are largely equivalent to the corresponding traits in the Big Five framework.

### *1.4. The present study*

The present study investigates how the six HEXACO personality dimensions relate to both the quantity and the quality of relationships in individuals' innermost network layers (support and sympathy groups). Based on previous examinations of the relationship between Extraversion and network characteristics (Asendorpf & Wilpers, 1998; Pollet et al., 2011), we expected Extraversion to positively relate to the size of both support and sympathy groups, but not to emotional closeness to their members. We hypothesized that other personality traits may relate to emotional closeness. Honesty-Humility is defined as the tendency to approach others with sincerity and fairness, and Agreeableness as the tendency to be flexible, forgiving, and tolerant (Ashton & Lee, 2007). We therefore put forward the explorative hypothesis that both Honesty-Humility and Agreeableness positively relate to emotional closeness to support and sympathy group members.

Further, based on prior research (Asendorpf & Wilpers, 1998; Roberts et al., 2008), we predicted that Emotionality, which captures many of the traits defining Neuroticism, would not relate to network layers' size. However, given that HEXACO Emotionality includes a sentimentality facet but excludes anger content (Lee & Ashton, 2004), we examined the hypothesis that it positively relates to emotional closeness. Given the inconsistencies regarding the relationship between Openness to Experience and network size (Jensen-Campbell et al., 2002; Selfhout et al., 2010), and the lack of evidence for a relationship between Conscientiousness and network characteristics, we did not make predictions for these dimensions.

## **2. Methods**

### *2.1. Data collection and sample characteristics*

525 participants completed an online survey in English or Dutch. Respondents were recruited via the personal networks of more than 20 international and Dutch



students. This recruitment method has successfully been used in previous social network research (Pollet et al., 2011; Roberts et al., 2009) and has the advantage of providing data from more diverse backgrounds than a student sample. Our sample consisted of 333 women (63.4%) and 192 men, with a mean age of 27 years ( $SD = 10.09$ ; range 18 to 83 years). The majority of respondents had a university degree (68.6%). Among them, 29.3% reported Dutch as their native language, 20.4% reported English, and 50.3% another language. Finally, 52.8% of participants reported having a partner (*married or in a relationship*), whereas 47.2% reported having no partner (*single, divorced, or widowed*) (for details on demographics, see ESM1-3).

## 2.2. Procedure and measures

Participants were first asked to list all people with whom losing contact forever would be upsetting (*“We would like you to think of the people who are most important to you, and to imagine not being able to speak or to see these people ever again”*). Then, they indicated which of these people they would turn to *“in times of severe emotional or financial distress”*. We defined the support group as individuals to whom participants would turn in times of severe emotional or financial distress, and the sympathy group as individuals with whom losing contact forever would be upsetting (Binder et al., 2012). These measures are commonly used to elicit individuals’ inner network layers (e.g., Binder et al., 2012; Buys & Larson, 1979).

Participants then reported how emotionally close they felt to each network member on a 0 to 100 scale (larger numbers indicated higher closeness). This measure, or an equivalent one, has been widely used by various research groups (Cummings et al., 2006; Hill & Dunbar, 2003; Jeon & Buss, 2007; Korchmaros & Kenny, 2001; Roberts et al. 2009). Further, emotional closeness is considered the most reliable indicator of tie strength (Marsden & Campbell, 1984) and is

significantly related to the frequency of both mobile phone (Saramäki et al., 2014) and face-to-face contact (Roberts & Dunbar, 2011b).

Subsequently, participants completed the 60-item version of the HEXACO personality inventory (Ashton & Lee, 2009), using 5-point Likert scales (1 = *strongly disagree*, 5 = *strongly agree*). The HEXACO-60 consists of items representing a broad range of content from all facets of the six HEXACO dimensions, and has demonstrated good levels of reliability and self-observer agreement (Ashton & Lee, 2009). In our sample, scales for the 6 HEXACO dimensions showed adequate reliability, with Cronbach's  $\alpha$  ranging from .70 to .80 (Honesty-Humility,  $\alpha = .70$ ; Emotionality,  $\alpha = .76$ ; Extraversion,  $\alpha = .80$ ; Agreeableness,  $\alpha = .73$ ; Conscientiousness,  $\alpha = .77$ ; Openness to Experience,  $\alpha = .76$ ). Finally, participants provided basic demographic information.

### 2.3. Analytical Techniques

Our interest was in predicting support group and sympathy group characteristics. Following previous research (Roberts et al., 2008; Pollet et al., 2011), our sympathy group measure excluded support group members, to avoid including the same individuals in two different sets of analyses. Similarly, we calculated average emotional closeness to individuals belonging only to the support group, and individuals belonging only to the sympathy group, separately.

In the next section, we report results from OLS regressions for support and sympathy group size, as well as emotional closeness to support and sympathy group members. For all regressions, we followed a hierarchical procedure. We first included all six HEXACO dimensions as predictors in our model. We then kept only significant personality predictors and added control variables as follows: sex (0 = *male*, 1 = *female*), age, university degree (0 = *no*, 1 = *yes*), native language (two

dummy coded variables; 0 = *Dutch and English*, 1 = *other*; 0 = *Dutch and other*, 1 = *English*), and relationship status (0 = *no committed partner*, 1 = *currently with committed partner*). For the analyses on emotional closeness variables, we also controlled for the corresponding layer size variables, given that previous research suggests a trade-off relationship between size and emotional closeness (Roberts et al., 2009). Finally, to test for the robustness of our results, we used a bootstrap procedure (Bias-Corrected and Accelerated (BcA) bootstrap with 1,000 samples; Davison & Hinkley, 1997; Efron, 1987). In the following section, we report results based on parameter estimates and 95% confidence intervals from bootstrapped analyses. All analyses were conducted in SPSS 20.0.

### 3. Results

#### 3.1. Descriptives and bivariate correlations

Descriptive statistics for the HEXACO dimensions, network layer size and emotional closeness can be found in ESM4. On average, the support group consisted of 5 individuals ( $SD = 3$ ), and the sympathy group, including support group members, consisted of 11 individuals ( $SD = 6$ ). The mean size of both layers is consistent with prior research (Dunbar & Spoors, 1995; Stiller & Dunbar, 2007). Results from bivariate Pearson's correlations, after performing BcA bootstrapping with 1,000 samples, between age, sex, HEXACO dimensions, and all network layer size and emotional closeness variables can be found in ESM5.

#### 3.2. Personality and network layer size

Table 1 shows results of the bootstrapped hierarchical regression analyses for network layer size variables. Results showed that Extraversion and Openness to Experience positively and significantly related to support group size. Furthermore, there was a marginally significant positive relationship between Emotionality and

support group size. The model accounted for 4% of the variance in support group size (adjusted  $R^2 = .04$ ,  $F(3, 513) = 7.60$ ,  $p < .001$ ).

Results for the sympathy group showed that none of the HEXACO dimensions significantly related to this layer's size. Among the control variables, only native language significantly related to sympathy group size (adjusted  $R^2 = .03$ ,  $F(2, 514) = 10.19$ ,  $p < .001$ ). Participants who reported Dutch or English as their native language indicated having a larger sympathy group, compared to participants who reported another language.

### 3.3. Personality and emotional closeness

Table 2 shows results of bootstrapped hierarchical regression analyses for emotional closeness variables. Results showed that Emotionality positively and significantly related to emotional closeness to support group. However, this effect was no longer significant after controlling for participant sex. Specifically, women felt emotionally closer to support group members, compared to men. Further, native language had a statistically significant relationship with emotional closeness to support group. Participants who indicated Dutch or English as their native language reported more closeness, compared to participants who indicated another language. Importantly, there was a significant, negative relationship between support group size and emotional closeness to this layer's members, such that participants with larger support groups reported lower levels of emotional closeness. The final model accounted for 7% of the variance in emotional closeness to support group (adjusted  $R^2 = .07$ ,  $F(5, 511) = 8.30$ ,  $p < .001$ ).

Results for the sympathy group showed that Honesty-Humility significantly and positively related to emotional closeness to sympathy group members. There was also a marginally significant relationship between Extraversion and emotional

closeness to sympathy group. Furthermore, participants' education level significantly related to emotional closeness to sympathy group, such that having a university degree was associated with reporting less closeness to sympathy group members. Finally, native language had a statistically significant relationship with mean emotional closeness to sympathy group members. Respondents who indicated Dutch or another native language reported more closeness, compared to participants who indicated English as their language. The final model accounted for 4% of the variance in emotional closeness to sympathy group (adjusted  $R^2 = .04$ ,  $F(5, 470) = 5.24$ ,  $p < .001$ ).

## **4. Discussion**

### *4.1. Summary of findings*

This study addressed the relationships of the six HEXACO personality dimensions with the size and emotional closeness of relationships at individuals' innermost social network layers. Regarding layer size, our findings suggest that extraverts have larger support groups, but not larger sympathy groups. Although previous studies have repeatedly demonstrated a relationship between Extraversion and network size variables (Asendorpf & Wilpers, 1998; Pollet et al., 2011), further research is needed to clarify whether this relationship can be observed at *all* network layers. For now, there is good evidence that Extraversion positively relates to support group size. With respect to emotional closeness to network members, our findings are in line with previous research (Pollet et al., 2011), suggesting that there is no significant relationship between Extraversion and emotional closeness to either support or sympathy group members.

This result may be considered surprising, given that Extraversion is linked to behavior that attracts social attention (Ashton et al., 2002), and that extraverts are

more outgoing, energetic, and cheerful than introverts (Kalish & Robbins, 2006). Given the link between frequency of contact and emotional closeness (Roberts & Dunbar, 2011b; Saramäki et al., 2014), it could be expected that, if extraverts have more frequent social interactions than introverts, this would build up higher emotional closeness. However, as in previous research (Roberts et al., 2009; Binder et al., 2012), this study found a negative relationship between support group size and emotional closeness to its members, suggesting a trade-off between maintaining a large network and having emotionally close relationships. Together, results suggest that extraverts may focus on maintaining a larger number of ties, rather than developing the emotional closeness of those ties.

Interestingly, our results suggest that Openness to Experience positively relates to support group size, but not necessarily sympathy group size. This result appears consistent with previous theoretical interpretations of Openness to Experience as reflecting inquisitiveness and creativity, thus potentially yielding social benefits and social attention (Ashton & Lee, 2007; Nettle, 2007). Future research should more closely examine whether Openness to Experience is indeed related to a larger number of relationships in the innermost network layers, or a larger number of new contacts, as other work suggests (Zhu et al., 2013).

In line with our prediction, Honesty-Humility, which reflects a tendency to approach others with sincerity and fairness (Lee & Ashton, 2004) was found to positively relate to emotional closeness, albeit only for the sympathy group. Results suggest that there is no direct, significant, relationship between Honesty-Humility and emotional closeness to support group members. Further, contrary to our hypotheses, Agreeableness does not seem to significantly relate to emotional intimacy at any layer.

Finally, our results are consistent with previous studies suggesting that Neuroticism does not relate to network size or other network characteristics (Asendorpf & Wilpers, 1998; Roberts et al., 2008). In our study, although Emotionality correlated with emotional closeness to support group members, this relationship was entirely attributable to gender differences in Emotionality (also see Ashton & Lee, 2007; Lee & Ashton, 2004).

#### *4.2. Strengths and limitations*

The present investigation contributes to the literature on individual differences and social networks in three ways. First, whereas previous work has focused on specific traits, such as Extraversion and Neuroticism (Pollet et al., 2011; Roberts et al., 2008), our study covered the relationships of all HEXACO personality dimensions with network size and emotional closeness. Second, in investigating the effects of the HEXACO dimensions on network characteristics, we differentiated between different network layers (support and sympathy groups; Dunbar & Spoors, 1995; Stiller & Dunbar, 2007), rather than treating a social network as homogeneous, as have other studies (Asendorpf & Wilpers, 1998; Selfhout et al., 2010). Finally, we investigated both the quantity and quality of relationships within network layers, examining not just the number of ties, but also their emotional closeness.

Following previous research (Binder et al., 2012; Buys & Larson, 1979; Dunbar & Spoors, 1995), we operationalized support groups as including individuals with whom losing contact forever would be upsetting, and sympathy groups as including individuals to whom participants would turn in times of severe emotional or financial distress. One drawback of these operationalizations is that they allow participants to include all reported social network members in either the support or the sympathy group. However, whereas previous studies defined the support group based

on relationship intimacy ratings (Pollet et al., 2011), our methodological choice has the benefit of measuring the support group independently of emotional closeness.

A potential limitation of this study is that it consisted of an online questionnaire. However, online surveys as a method of obtaining self-report data have been successfully used in prior social network research (Binder et al., 2012). Further, this method facilitates the recruitment of a large sample size, as the one obtained herein. Finally, this study relied on students to recruit participants, though more than 20 students were involved in recruitment. Although this method does not provide a representative sample of the population and can introduce noise, it has the advantage of delivering data from a broader range of ages and backgrounds than a typical student sample (Pollet et al., 2011).

#### *4.3 Conclusion*

To conclude, this study suggests that the personality traits of Extraversion, Openness to Experience, and Honesty-Humility, meaningfully relate to network layer size and emotional closeness to network members. Further research is needed to establish how personality relates to such characteristics at different social network layers. However, the present research highlights the importance of employing a broad framework of personality structure to investigate both the quantity and quality of relationships within social networks.

#### **Acknowledgments.**

To be included.



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## Appendix

*Table 1.* Results from hierarchical regressions for network layer size, after BcA bootstrapping with 1000 samples.

| Dependent variable  | Model                           | Predictors                                   | B      | <i>b</i> (bootstrap) | <i>p</i> (bootstrap) | Lower  | Upper  |
|---------------------|---------------------------------|--|--------|----------------------|----------------------|--------|--------|
| Support group size  | <i>Model 1</i> ( $R^2 = 0.04$ ) | Emotionality                                 | 0.101  | 0.552                | .060                 | -0.077 | 1.072  |
|                     |                                 | Extraversion                                 | 0.131  | 0.751                | .004                 | 0.267  | 1.260  |
|                     |                                 | Openness to Experience                       | 0.131  | 0.737                | .002                 | 0.292  | 1.170  |
| Sympathy group size | <i>Model 1</i> ( $R^2 = 0.03$ ) | Native language<br>(Dutch/English vs. Other) | -0.204 | -1.870               | .001                 | -2.780 | -0.972 |
|                     |                                 | Native language<br>(Dutch/Other vs. English) | -0.018 | -0.203               | .756                 | -1.426 | 1.050  |
|                     |                                 |  |        |                      |                      |        |        |

*Notes.* Sympathy group size = net sympathy group size (excluding support group members). Lower and upper represent the lower and upper 95% CI for bootstrapped estimates.

*Table 2.* Results from hierarchical regressions for emotional closeness (EC), after BcA bootstrapping with 1000 samples.

| Dependent variable | Model                           | Predictors                                   | $\beta$ | <i>b</i> (bootstrap) | <i>p</i> (bootstrap) | Lower  | Upper  |
|--------------------|---------------------------------|--|---------|----------------------|----------------------|--------|--------|
| EC support group   | <i>Model 1</i> ( $R^2 = 0.01$ ) | Emotionality                                 | 0.091   | 1.811                | .039                 | 0.077  | 3.760  |
|                    | <i>Model 2</i> ( $R^2 = 0.04$ ) | Emotionality                                 | 0.012   | 0.229                | .806                 | -1.695 | 2.190  |
|                    |                                 | Gender                                       | 0.182   | 4.816                | .002                 | 2.292  | 7.765  |
|                    | <i>Model 3</i> ( $R^2 = 0.05$ ) | Emotionality                                 | 0.028   | 0.557                | .571                 | -1.448 | 2.624  |
|                    |                                 | Gender                                       | 0.163   | 4.311                | .003                 | 1.746  | 7.125  |
|                    |                                 | Native language<br>(Dutch/English vs. Other) | -0.141  | -3.591               | .003                 | -5.637 | -1.409 |
|                    | <i>Model 4</i> ( $R^2 = 0.07$ ) | Native language<br>(Dutch/Other vs. English) | -0.125  | -3.959               | .006                 | -6.523 | -1.344 |
|                    |                                 | Emotionality                                 | 0.037   | 0.738                | .430                 | -1.215 | 2.864  |
|                    |                                 | Gender                                       | 0.164   | 4.325                | .002                 | 1.851  | 7.001  |
|                    |                                 | Native language<br>(Dutch/English vs. Other) | -0.134  | -3.399               | .004                 | -5.439 | -1.267 |
|                    |                                 | Native language<br>(Dutch/Other vs. English) | -0.111  | -3.533               | .011                 | -6.157 | -0.982 |
|                    |                                 | Support group size                           | -0.151  | -0.551               | .002                 | -0.897 | -0.222 |
|                    |                                 |  |         |                      |                      |        |        |

*Table 2 continued.*

|                   |                                 |                           |        |        |      |        |        |
|-------------------|---------------------------------|---------------------------|--------|--------|------|--------|--------|
| EC sympathy group | <i>Model 1</i> ( $R^2 = 0.02$ ) | Honesty-Humility          | 0.124  | 3.751  | .008 | 0.960  | 6.237  |
|                   |                                 | Extraversion              | 0.083  | 2.406  | .068 | -0.241 | 5.148  |
|                   | <i>Model 2</i> ( $R^2 = 0.03$ ) | Honesty-Humility          | 0.134  | 4.050  | .004 | 1.297  | 6.434  |
|                   |                                 | Extraversion              | 0.085  | 2.472  | .057 | -0.142 | 5.165  |
|                   |                                 | Degree                    | -0.139 | -5.419 | .003 | -8.896 | -1.922 |
|                   | <i>Model 3</i> ( $R^2 = 0.04$ ) | Honesty-Humility          | 0.128  | 3.858  | .006 | 1.073  | 6.373  |
|                   |                                 | Extraversion              | 0.077  | 2.241  | .089 | -0.349 | 4.865  |
|                   |                                 | Degree                    | -0.118 | -4.585 | .009 | -7.996 | -1.060 |
|                   |                                 | Native language           | -0.088 | -3.156 | .068 | -6.393 | 0.467  |
|                   |                                 | (Dutch/English vs. Other) |        |        |      |        |        |
|                   |                                 | Native language           | -0.128 | -5.700 | .011 | -9.879 | -1.517 |
|                   |                                 | (Dutch/Other vs. English) |        |        |      |        |        |

*Notes.* EC sympathy group = EC net sympathy group (excluding support group members). Lower and upper represent the lower and upper 95% CI for bootstrapped estimates.

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